1 INSTRUCTION TO BIDDERS

1.1 INTENT OF BID PROCESS

1.1.1 The intent of this Request for Proposal (RFP) is to solicit offers to provide all materials, engineering, equipment, installation, supervision and training services for the proper installation of fiber-optic cabling to provide network connectivity within and between the customer sites, all according to the specifications set forth herein.

1.1.2 A Bidder, by making the bid (the "Bid"), represents and warrants that it possesses the capabilities, hardware and personnel necessary to successfully install operating equipment according to the specifications.

1.1.3 Responses to this RFP will constitute an integral part of the final contract to be negotiated with the successful bidder.

1.2 INVITATION TO BID

1.2.1 Bidders are invited to submit a Bid based on labor costs, materials, capabilities, technologies, systems and equipment described in this RFP. The Purchaser shall in its sole discretion, accept or reject any Bid. The currency used for the said Bids shall be in United States dollars. Prices shall be quoted in United States dollars.

1.3 SPECIFIC INSTRUCTIONS TO BIDDERS

1.3.1 Before submitting a Bid, each Bidder shall carefully consider the amount and character of the work to be done as well as the difficulties involved in its proper execution. Bidders should include in their Bids all costs necessary to install the specified system. A cost not specifically itemized in the proposal shall not be incurred unless specifically agreed upon by the Purchaser in writing. No claims for compensation will be considered or allowed for extra work resulting from ignorance of any existing conditions on the part of the Bidder.

1.3.2 All Bids must be precise, to the point, and numbered to correspond with the numbering in this document. Bidders shall provide a technical response addressing every line item specification herein. The Purchaser may in its sole discretion on a case-by-case basis, evaluate alternatives to the specification. Any exception must be clearly specified as such, and the Purchaser reserves the right to reject any Bids that do not comply with this instruction.

1.3.3 The Purchaser reserves the right to accept any Bid or, at its discretion, reject any or all Bids for whatever reasons it deems appropriate. Receipt of a Bid response does not obligate the Purchaser to pay any expenses incurred by the Bidder in preparation of the Bid response or obligate the Purchaser in any other respect.

1.3.4 The Purchaser reserves the right to modify the specifications contained herein at any time during the bidding period. No modification or interpretation of the specifications other than through the issuance of addenda will be binding upon the Purchaser. Bidders must notify the Purchaser as soon as possible of any omissions or errors in the specifications so that corrective addenda may be issued. Such notification must be received by the Purchaser at least ten (10) days before the deadline for submission of

Bids.

1.3.5 Bids will be accepted for review and consideration by **Tom Jones, Broadband Operations Manager,** at **Red-Spectrum Communications**, up until **4:30 PM** (Pacific Standard Time) on **July 7, 2006** (Friday). Proposal received after this deadline will be returned unopened.

Tom Jones – Broadband Operations Manager

Red-Spectrum Communications - Information Technology Center

111 N. 8th Street

Plummer, Idaho 83851

Telephone: (208) 686-0918 Fax: (208) 686-2047

Email: < tjones@cdatribe-nsn.gov >

1.3.6 Two (2) copies of each Bid response shall be submitted. One (1) copy sent to **Tom Jones, Broadband Operations Manager** (identified in paragraph 1.3.5) and one (1) copy sent to **Valerie Fast Horse, IT Director**.

Valerie Fast Horse – IT Director

Coeur d'Alene Tribe

111 N. 8th Street

Plummer, Idaho 83851

1.3.7 Bidders shall send a letter by **June 19, 2006** (Monday), stating intent to submit a proposal. Bidders, who elect not to submit a response, must return this RFP in its entirety to the Purchaser within fourteen (14) working days of receipt.

1.3.8 Proposals will not be accepted from Bidders who have not submitted a letter of intent.

1.3.9 All technical questions regarding this RFP may be submitted to the Purchaser at any time on or before **June 27, 2006** (Tuesday) to: **Tom Jones** (identified in paragraph 1.3.5). If the questions affect the RFP Specifications, any new information or changes to this RFP will be re-sent to all Bidders

1.3.10 Bidder is required to attend a pre-bid conference and site survey. Any failure by the Bidder will eliminate the Bidder from the RFP process. Furthermore, no allowances for cost adjustments will be made if Bidders fail to adequately examine the premises before submitting a proposal.

1.3.11 Site surveys must be scheduled and conducted no later than **June 27, 2006** (Tuesday) or as arranged between Purchasers and Bidder. Questions regarding the site surveys should be directed to the same Purchaser contact identified in paragraph 1.3.5.

1.3.12 A bidder pre-bid conference is scheduled to be conducted on **June 23, 2006** (Friday) at **10AM** at the Technology center in Plummer Idaho, or as arranged between Purchasers and Bidder. Questions should be directed to the same Purchaser contact identified in paragraph 1.3.5. It is required that all Bidders attend or make arrangements for a meeting.

Coeur d' Alene Tribe

Information Technology Center

111 N. 8th Steet

Plummer, Idaho 83851

Telephone: 208-686-2045

1.3.13 During the period from now until the contract is awarded, all communications with Purchaser shall be directed to the Purchaser contact identified in paragraph 1.3.5. Violation of this requirement will render the Bidder's response null and void.

1.3.14 All information in this RFP is confidential, and should not be disclosed except to those responding to this RFP.

1.3.15 All proposals submitted will be considered property of the Purchaser and may be released in part or in total for third party evaluation; unless other arrangements are approved by Purchaser at the time of Bid submission. Neither the transmission of the RFP nor acceptance of a reply shall imply any obligation or commitment on the part of the Purchaser.

1.3.16 The Purchaser reserves the right to use any or all design ideas or concepts presented in any proposal submitted in response to this RFP, whether amended or not.

1.3.17 Proposals submitted may be reviewed and evaluated by any person, at the discretion of the Purchaser, including third party and independent consultants retained by the Purchaser, now or in the future, with the exception of individuals in direct competition with this proposal.

1.3.18 All Bidders will be notified of the selection of the successful Bidder by letter as expeditiously as possible, but not before approval by Purchaser's management.

1.3.19 No public mention of this RFP, the award of any contract related to this RFP or the Purchaser for publicity purposes will be allowed without Purchaser's prior written approval.

1.3.20 The selected Bidder will be considered the primary contractor and will assume total responsibility to provide the Purchaser with all material and services needed to make the

system fully operational by the agreed upon date. The Purchaser will require references, names of the officers, names and responsibilities of those to be assigned to this project including subcontractors.

1.3.21 If the primary contractor decides to use the services of one or more subcontractors, the following applies: the Purchaser reserves the right to select and approve subcontractors; the primary contractor must agree to be responsible for the actions and quality of workmanship of the subcontractor(s). The primary contractor, at all times during performance and until work is completed and accepted, shall have on the premises a competent supervisor, satisfactory to the Purchaser and with authority to act for the vendor; and the primary contractor will comply with all union rules (as applicable) and regulations in force at the project site.

1.3.22 Contractor and/or subcontractor(s) shall get clearance from Purchaser's representative before entering any and all areas of the building to perform work assignments.

1.3.23 Contractor and/or subcontractor(s) shall comply with INDIAN PREFERENCE REQUIREMENTS (Section 7(b) of Public Law 93-638 (25USC 450E) and 41 CFR 14-1.354 require that preference opportunities in employment and training be given to Indian/Alaska Native individuals and that preference in the award of subcontracts be given to Indian/Alaska Native economic enterprises. Failure by the Contractor to submit a plan for doing so prior to award or to implement the same after award shall be sufficient reason for non-award or termination of the Contract for default).

1.3.24 TRIBAL EMPLOYMENTS RIGHT ORDINANCE (TERO): The Contractor and any subcontractors will comply with the Coeur d'Alene Tribal Employment Rights Ordinance (TERO) which is hereby made a part of this Contract. All bidders should contact the TERO office to obtain full information before bidding. The TERO office can be contacted at:

Coeur d'Alene Tribal Employment Rights Office

TERO Director

850 A Street

PO Box 408

Plummer Idaho 83851

Telephone: (208) 686-1273

1.3.25 Only bids of vendors, contractors and/or subcontractors properly licensed to do business in the State of Idaho will be considered. Labor unions involved in any collective bargaining agreements covering any employees who will be working on the Purchaser's premises must be specified.

1.3.26 Bidders must demonstrate their familiarity with Fiber-optic cable products, installation methods and design considerations by presenting recent documentation related Fiber-

optic installations.

1.3.27 Bidders must demonstrate prior successes installing complete Fiber-optic cabling solutions by submitting a list of no less than 3 previous installations of that kind.

1.3.28 The Purchaser shall require the successful Bidder to sign an agreement drafted by the Purchaser including all the requirements, deliverables and remedies agreed to and negotiated by both parties. The agreement shall be governed by and construed according to the laws of the Coeur d'Alene Tribe, without regard to the choice of law provisions of any jurisdiction.

1.3.28.1 Bidders should not submit contracts as part of their proposal.

2 CONTRACT ISSUES

2.1 RISK OF LOSS

2.1.1 All risks of loss or damage to the equipment during and until delivery to Purchaser as a result of fire, theft, water, malicious mischief or other cause shall be borne by the successful Bidder. This responsibility shall continue until receipt and acceptance by the Purchaser.

2.2 LAWS, ORDINANCES, CODES, ETC.

2.2.1 The successful Bidder will comply with all applicable state laws, codes, ordinances, rules and regulations as applicable to the work to be performed.

2.3 PATENT INFRINGEMENTS

2.3.1 The successful Bidder shall agree to indemnify the Purchaser with respect to any legal suit, claim or proceeding which may be brought against it by any third party claiming that the use of the proposed system constitutes an infringement of any patent or trade secret. The successful Bidder will further agree to defend the Purchaser against any such claims and to pay all litigation costs, attorneys' fees, settlement payments and any damages awarded or resulting from any such claims.

2.4 IMPLEMENTATION SCHEDULE

2.4.1 Each Bidder shall be required to submit with its Bid response a detailed implementation schedule outlining major milestones and associated time frames and methods of project control.

2.4.2 The successful Bidder shall assign a Project Manager who will assume overall responsibility for the project.

2.4.3 All appropriate details should be specified in the implementation schedule.

2.4.4 The dates for commencement and completion of the specified work are essential conditions of the contract. The successful Bidder shall be required to proceed with the work at a rate of progress that will ensure full completion within the contract time, subject to delays caused by Purchaser. It is expressly understood and agreed by and between

the successful Bidder and the Purchaser that the contract time for completion of the work as stated above is reasonable time.

2.5 PAYMENT SCHEDULE

2.5.1 All Bidders must submit a detailed payment schedule showing percentage payment requirements and the corresponding anticipated dates for work completion.

3 INSTALLATION PROCESS

3.1 DOCUMENTATION

3.1.1 Before system acceptance, the successful Bidder shall submit the following to **Tom Jones** (identified in paragraph 1.3.5) and **Valerie Fast Horse** (identified in paragraph 1.3.6).

3.1.1.1 Two (2) complete sets of system manuals including installation, operation and maintenance procedures. The successful Bidder agrees to update these manuals as updates are published, and shall grant the Purchaser permission to copy any or all portions of these documents for internal use.

3.1.1.2 Fully documented drawings of the entire distribution system, including cable routes, and all other information pertinent to the installation.

3.1.1.3 After installation is complete, drawings must be updated to reflect any as-built modifications.

3.1.1.4 The successful Bidder must provide cable records which detail fiber count, cross-connects and equipment type.

3.1.1.5 Certification that the system is complete, conforms to Purchaser's specifications and is free and clear of any liens and encumbrances, including mechanics' liens.

3.2 During the installation process, the successful Bidder shall:

3.2.1.1 Submit weekly progress reports pertaining to all aspects of the installation program.

3.2.1.2 Meet with Purchaser's personnel on a weekly basis to discuss the progress of the installation.

3.2.2 The successful Bidder shall provide an outline of recommended system administration documentation and how this documentation shall be kept accurate.

3.3 CHANGES TO THE CONTRACT

3.3.1 During the course of the installation process, the Purchaser will, as requested or as seems desirable, issue clarifications on the specifications. Should the successful Bidder believe that any clarification in fact constitutes a change to the contract, he shall so notify the Purchaser in the form of a Change Proposal, identifying all proposed changes to the contract. However, the contract may only be modified in a writing signed by an authorized representative of Purchaser.

3.3.2 During the course of the installation process, either party may issue requests for changes in the contract. This shall take the form of a Change Proposal which, if accepted by both parties, shall be executed as a written change to the contract which will thereby be amended to the extent of the change. When, in the judgment of the Purchaser, a need for immediate action exists, the successful Bidder may be directed to proceed on a time and materials basis with the proposed change. In no event shall changes involving extra cost the Purchaser be allowed to proceed without prior approval.

3.4 RESPONSIBILITY OF THE PURCHASER IN THE INSTALLATION PROCESS

3.4.1 The Bidder shall clearly define the expected responsibilities of the Purchaser during the installation phase of the project. This shall include all construction for which the Purchaser will be responsible. Specific locations will be addressed during contract negotiations, but general responsibilities and expected standards are to be included in the bid response.

4 WARRANTY

4.1 The successful Bidder must provide written warranty certification.

4.2 The successful Bidder must offer a Ten (10) year extended warranty for the premises fiber cabling solution products.

4.3 The successful Bidder shall warrant that all materials and equipment furnished under the contract are in good working order, free from defects and in conformance with system specifications. All installed equipment must conform to the manufacturer's official published specifications. The warranty shall begin at the system acceptance date and remain in effect for a period of Ten (10) years from that date. The successful Bidder shall agree to repair, adjust and/or replace (as determined by the Purchaser to be in its best interest) any defective equipment, materials or other parts of the system at the successful Bidder's sole cost. The Purchaser will incur no costs for service or replacement of parts during the warranty period of 10 years. All third party warranties shall be passed through from Bidder to Purchaser.

4.4 The successful Bidder shall warrant and supply evidence that the installation of materials and hardware will be made in strict compliance with all applicable provisions of the National Electric Code®, the rules and regulations of the Federal Communications Commission and state and/or local codes or ordinances that may apply.

4.5 The successful Bidder shall warrant that the system will function as specified in the approved manufacturer's Technical Description Guide.

4.6 The successful Bidder shall warrant that the system shall accommodate traffic at the levels specified in all appropriate sections of this Request for Proposal.

5 MAINTENANCE

5.1 Each Bidder shall be required to provide a complete maintenance plan, including emergency and non-emergency maintenance and periodic maintenance schedules.

Such maintenance schedules shall specify coverage for the fiber-optic system, associated patch-panel equipment, cords and jumpers. Routine maintenance and associated costs should be included in this session.

5.2 Each Bidder shall include costs of full coverage, partial coverage and time and materials particulars. Also, each Bidder shall state the location of the parts depot or storage warehouse which stocks parts for the proposed fiber-optic and/or copper cable system.

5.3 Each Bidder shall include the costs of post installation activity and expansions for each maintenance coverage option.

5.4 The successful Bidder shall certify, in writing, the ability to provide spare parts and the ability to maintain the systems for at least Ten (10) years and shall not have the right to terminate or assign its obligations without the prior written consent of the Purchaser.

5.5 The successful Bidder must provide an escalation chart which indicates time limits, levels of escalation, and individuals' names, titles and locations to be used in case of extraordinary problems.

5.6 Each Bidder shall include all warranty coverages.

5.7 Each Bidder shall include a representative copy of its maintenance agreement for review by the Purchaser. All maintenance for the fiber-optic cable shall be provided directly by the successful Bidder. Any subcontracting arrangements must be clearly defined.

5.8 Each Bidder shall specify a commitment in terms of future maintenance support for the fiber-optic cable system products.

6 TRAINING

6.1 The successful Bidder shall provide training for up to three (3) employees on how to make patch connections, configure and test any equipment.

6.1.1 The successful Bidder will be expected to provide a sufficient level of training to the Purchaser's installation engineers to allow for installation and maintenance to be carried out to the manufacturer's specifications.

6.1.2 Each Bidder shall clearly describe user training provided, including materials and procedures employed.

6.1.3 During the warranty period, the successful Bidder shall provide additional training to additional engineers as need is determined by the Purchaser at the installation site.

6.2 The successful Bidder shall provide all reference manuals, booklets and other materials required for training.

6.3 The Purchaser may elect to maintain its equipment. Bidders are requested to indicate availability and approximate costs of suitable training programs.

7 FINAL SYSTEM ACCEPTANCE POLICY

7.1 A standard fifteen percent (15%) holdback of the contract price will be implemented and final payment will not be released until successful Bidder conducts an acceptance test in conjunction with the Purchaser to validate that work has been completed in accordance with the terms and conditions of the above; that all defects have been corrected; that all accounts for extra work and material and allowances for omissions have been rendered and agreed to; that there are no outstanding liens, mechanic's liens or claims for material furnished or labor performed on the work; and that the system has functioned at a normal operating load for a period of thirty (30) continuous days.

7.2 Acceptance of the system and the release of final payment will be dependent on the following items meeting specifications set forth in Section II.

7.2.1 Fiber-optic cable attenuation test results within the stated parameters on all fibers

7.2.2 Fiber-optic cable connector loss test results — on all fiber-optic cable components within the system

7.2.3 Loss specifications per fiber-optic link in system based on actual measurements

7.2.4 Installation should conform to manufacturer's specifications. A post installation audit should confirm that all the manufacturer's installation criteria are within specification. Measurements and results will be provided to the Purchaser.

7.3 The Purchaser reserves the following rights to itself or its designated representatives; to inspect all work performed; to approved cable pulling operations and termination method; to designate patch-panel locations; to stop work in progress that does not conform to industry standards.

7.4 All tests will be submitted to the customer at the completion of the project.

8 REMEDIES/CONSEQUENTIAL DAMAGES

8.1 NON-PERFORMANCE

8.1.1 In the event of non-performance on the part of the successful Bidder (i.e., failure and/or inability to meet agreed upon deadline and specifications as outlined herein), consequential damages (including lost profits) may be claimed by the Purchaser.

8.2 REJECTED WORK

8.2.1 The successful Bidder shall promptly remove from Purchaser's premises equipment rejected by the Purchaser for failure to comply with the contract documents. The successful Bidder shall promptly replace rejected equipment in accordance with the contract documents and without further expense to the Purchaser.

8.2.2 If the successful Bidder does not take action to remove and replace rejected equipment within ten (10) days after receipt of written notice, the Purchaser reserves the right to remove and replace such work. The successful Bidder shall be responsible for shipping,

handling and storage expense of said materials.

9 CONTRACTOR RESPONSIBILITIES

9.1 The contractor shall furnish the materials, tools and equipment required to perform the tasks outlined in this document.

9.2 The contractor shall adhere to the Purchaser's fire and safety regulations.

9.3 All areas affected by installation, shall be restored to their former condition at contract, as agreed upon between the contractor and the customer. The contractor is responsible for the cost of all repairs, painting and other restoration needed due to damage caused by the installation.

9.4 The contractor shall be responsible for the storage and safeguarding of material, supplies and tools. The contractor is responsible for the removal of all their trash and debris from the site at the end of each working day.

9.5 The contractor shall be responsible to verify that all installations and materials conform to all applicable codes.

9.6 The contractor shall be responsible to verify that all installations and materials comply with standards set forth in the National Electrical Safety Code

9.6.1 The contractor shall be responsible to verify that cable shall be of a design for maximum protection against environmental stresses and connecting hardware shall be suitable for outdoor use.

9.7

10 FINAL SYSTEM TEST AND DOCUMENTATION

10.1 FINAL TESTING

10.1.1 All cabling, which is terminated by the contractor, shall be tested to applicable EIA/TIA Standards.

10.1.2 The insertion loss for each mated fiber-optic connector pair shall be $\leq$ 0.75 dB. Reflectance for single-mode single fiber UPC cable assemblies shall be $\leq$ -55 dB. Mated connector pair loss testing shall be based on one unidirectional OTDR inspection in accordance with the OTDR operating manual for systems greater than 300 meters.

10.1.3 In addition to connector insertion loss for each mated pair, the contractor shall perform end-to-end insertion loss testing for each single-mode fiber strand at 1310 nm and 1550 nm from one direction for each terminated fiber span in accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 90 meters, each tested span must test to a value less than or equal to the value determined by calculating a link loss budget.

10.1.4 Inspect each terminated single-mode fiber span for continuity and anomalies with an OTDR at 1550 nm from one direction in accordance with OTDR operating manual for

systems greater than 100 meters.

10.2 FINAL DOCUMENTATION

10.2.1 Provide final documentation consisting of:

10.2.1.1 End-to-End Insertion Loss Data

10.2.1.2 Individual Splice Loss Data

10.2.1.3 “As Installed” Diagram

10.2.1.4 OTDR Traces

10.2.1.5 Connector Insertion Loss Data

10.2.2 The contractor shall provide the Purchaser with one hard copy and one electronic copy of final test results.

11 SYSTEM REQUIREMENTS

11.1 GENERAL SYSTEM CONSIDERATIONS

11.1.1 A 36 strand or greater Fiber-optic cable shall be installed from the Coeur d’Alene Tribe Broadband NOC and shall be terminated at the microwave utility building on top of Plummer-Butte mountain.

11.1.2 Fiber-optic cable strands shall be finished and terminated in termination equipment as specified. Termination equipment will be fiber-optic Patch-panels with "ST" type connectors.

11.1.3 Contractor will provide and install the fiber-optic Patch-panels. All patch-panel enclosures will be large enough to accommodate all fiber-optic terminations possible at the panel. All strands must be terminated on 19 inch rack patch-panels at both ends. Termination connectors in the fiber-optic Patch-panels shall be "ST" type connectors.

11.1.4 All patch-panels and splice boxes must have covers that can be closed and locked.

11.1.5 Contractor will provide 10 patch-panel cords six feet in length which allows connections from the patch-panel to Fiber-optic ST terminated devices.

11.1.6 Contractor will provide 10 patch-panel cords six feet in length which allows connections from the patch-panel to Fiber-optic SC terminated devices.

11.1.7 Contractor will provide 10 patch-panel cords six feet in length which allows connections from the patch-panel to Fiber-optic SFP Module LCr terminated devices.

11.1.8 Contractor will provide 10 Fiber-optic SFP Modules and any necessary optical attenuators which connect with LCr terminated Fiber-optic patch cables. The Fiber-optic SFP Modules shall be appropriate for the total end-to-end distance of the Fiber-optic cable from the NOC to Plummer-Butte.

11.1.9 Contractor will provide Fiber-optic link budget documentation indicating the Fiber-optic SFP Modules are of an appropriate rating for use from the NOC through the Fiber-optic cable to Plummer-Butte.

11.2 FIBER-OPTIC CABLE PATH FROM NOC TO PLUMMER-BUTTE

11.2.1 In the NOC, a contractor supplied 19 inch rack patch-panel shall terminate the Fiber-optic cable.

11.2.2 The Fiber-optic cable is to be routed from the NOC server room through the attic to the roof of the NOC building.

11.2.3 The Fiber-optic cable shall extend from the roof of the NOC to a telephone pole.

11.2.4 The Fiber-optic cable shall then be secured on telephone poles using the approved pole route in the City of Plummer to a point where there Fiber-optic cable shall then be placed in underground conduits.

11.2.5 The Fiber-optic cable shall then be routed through existing underground two inch conduits and vaults to the top of Plummer-Butte.

11.2.6 The contractor shall extend a terminating above ground conduit next to the utility building at Plummer-Butte the final few feet so that the conduit enters the utility building. The Fiber-optic cable shall enter the utility building through this conduit.

11.2.7 The Plummer-Butte side of the Fiber-optic cable shall be terminated into a contractor supplied 19 inch rack patch-panel.

11.2.8 All underground conduits shall have a locater trace wire inserted with the Fiber-optic cable.

11.2.9 All above ground Fiber-optic cables secured to telephone poles shall have identification markers indicating a Fiber-optic cable.

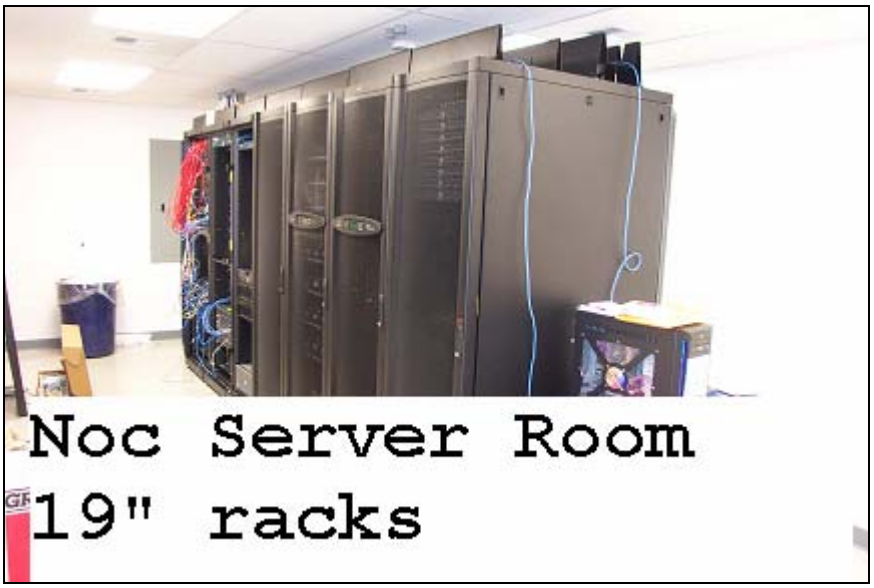
11.3 FIBER-OPTIC CABLE ROUTE MAPS AND PICTURES

11.3.1 The image in 11.3.2 is a satellite picture indicating the Fiber-optic cable route. The white line indicates above ground telephone pole to telephone pole routes. The black line indicates the existing underground two inch conduits which are to be used for the underground portion of the Fiber-optic cable route.

11.3.2

11.3.3 The picture in 11.3.4 shows the NOC server room. A contractor supplied 19 inch rack fiber patch-panel will installed inside of a rack. All fibers at the NOC server room of the fiber cable run shall be terminated into ST style connectors in the patch-panel.

11.3.4

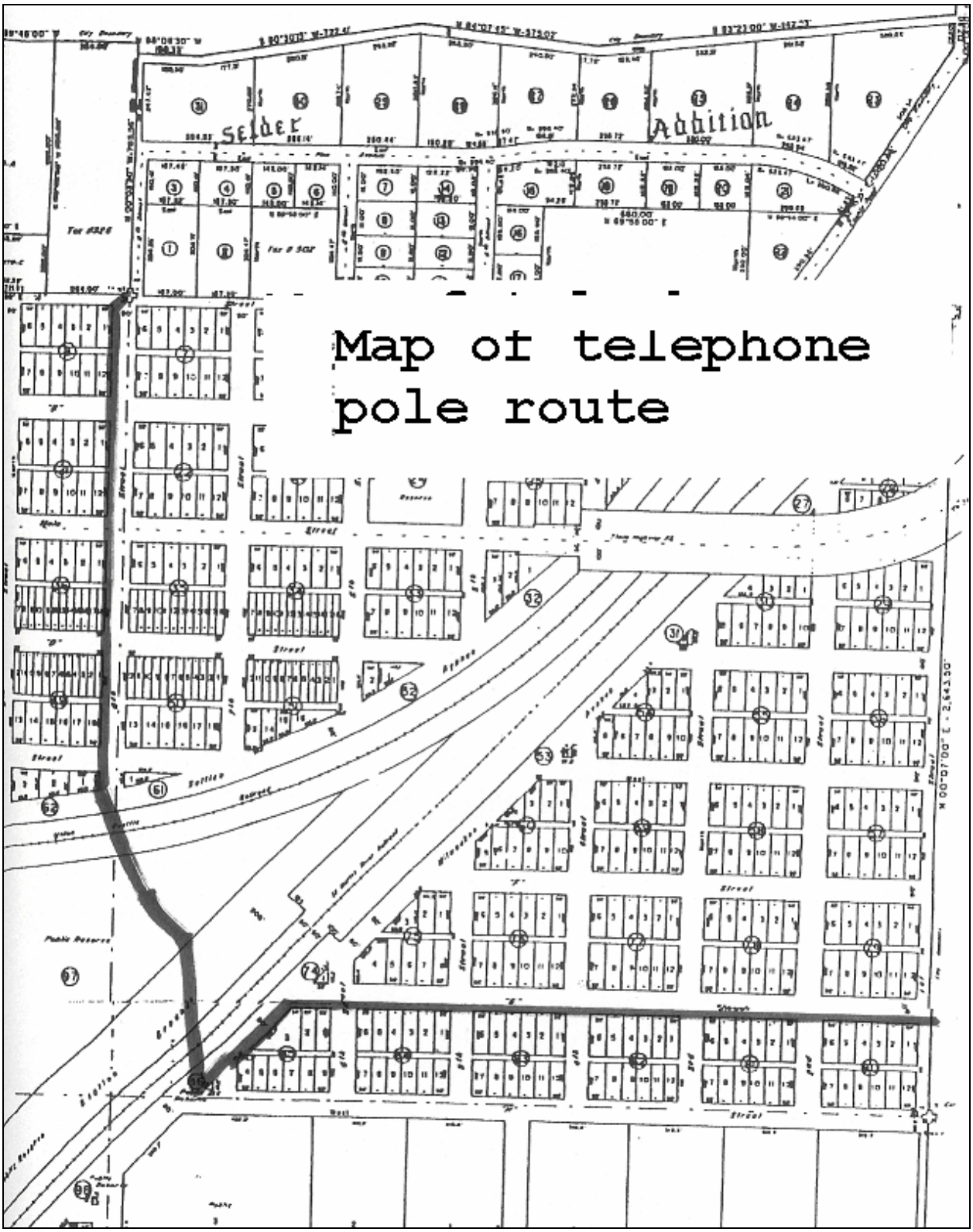


11.3.5 Section 11.3.6 is a picture of the NOC building and the first telephone pole the Fiber-optic cable will attach to.

11.3.6

11.3.7 Section 11.3.8 is a telephone pole route map through the City of Plummer.

11.3.8



11.3.9 Section 11.3.10 is a list of telephone pole identifications which may be used.

Table of contents

Telephone Pole IDs

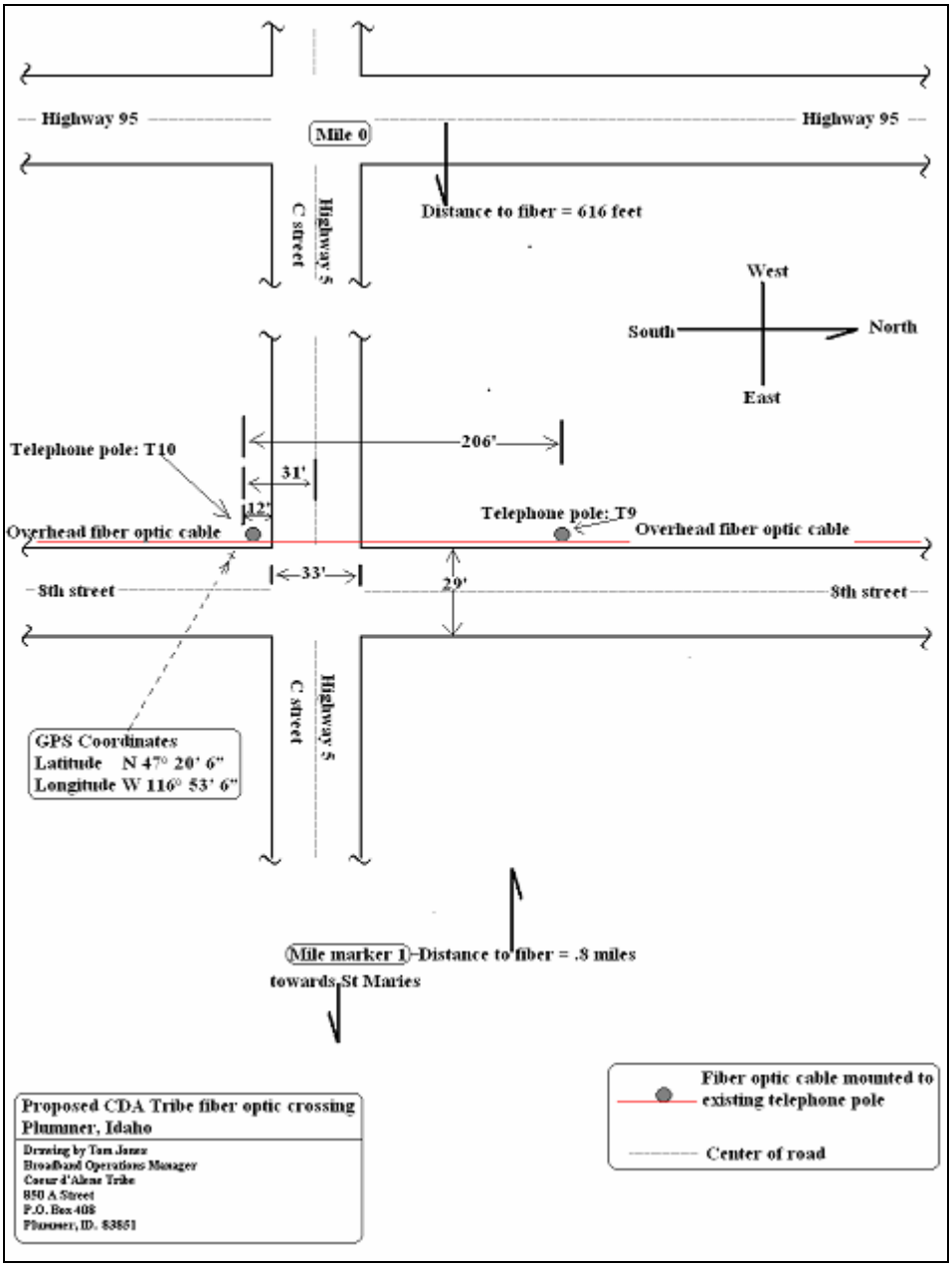
Number of poles 39

POLE IDENTIFICATION #	POLE TO POLE
1. 30 T	30T to T5=49ft.
2. T 5	T5 to 140T=33ft.
3. 140 T	140T to T7=111ft.
4. T 7	T7 to T8=174ft.
5. T 8/40 T	T8 to T9=236ft
6. T 9	T9 to T10=206ft.
7. T 10	T10 to T11=96ft.
8. T 11	T11 to T12 =156ft.
9. T 12	T12 to T13=113ft.
10. T 13	T13 to T14=146ft.
11. T 14	T14 to T15=237ft.
12. T 15	T15 to T16=180ft.
13. T 16	T16 to T17=101ft.
14. T 17	T17 to T18=203ft.
15. T 18	T18 to 40T/T19=211ft.
16. 40 T/T 19	40T/T19 to T19.1=113ft.
17. T 19.1	T19.1 to T19.2= 115ft.
18. T 19.2	T19.2 to T19.3=150 ½ ft.
19. T 19.3	T19.3 to T19 .3A=213 ft.
20. T 19.3A	T19.3A to T22/5.01=110ft.
21. T 22/5.01	T22/5.01 to T22/5.02=84ft.
22. T 22/5.02	T22/5.02 to T22/5.03=177ft.
23. T 22/5.03	T22/5.03 to 20T/T22/5.04=186ft.
24. 20T/T22/5.04	20T/T22/5.04 to T22/40T/5.05=197ft.
25. T22/40T/5.05	T22/40T/5.05 to T22/5.06=259ft.
26. T22/5.06	T22/5.06 to T22/5.07=240ft.
27. T22/5.07	T22/5.07 to T22/5.08=126ft.
28. T22/5.08	T22/5.08 to T22/5.09=161ft.
29. T22/5.09	T22/5.09 to T22/5.10=165ft.
30. T22/5.10	T22/5.10 to T22/5.11=37ft.
31. T22/5.11	T22/5.11 to T22/5.12=162ft.
32. T22/5.12	T22/5.12 to T22/5.13=169ft.
33. T22/5.13	T22/5.13 to T22/5.14=232ft.
34. T22/5.14	T22/5.14 to T22/5.15=190ft.
35. T22/5.15	T22/5.15 to T22/5.16=159ft.
36. T22/5.16	T22/5.16 to T22/5.17=152ft.
37. T22/5.17	T22/5.17 to T22/5.17A=50ft.
38. T22/5.17A	

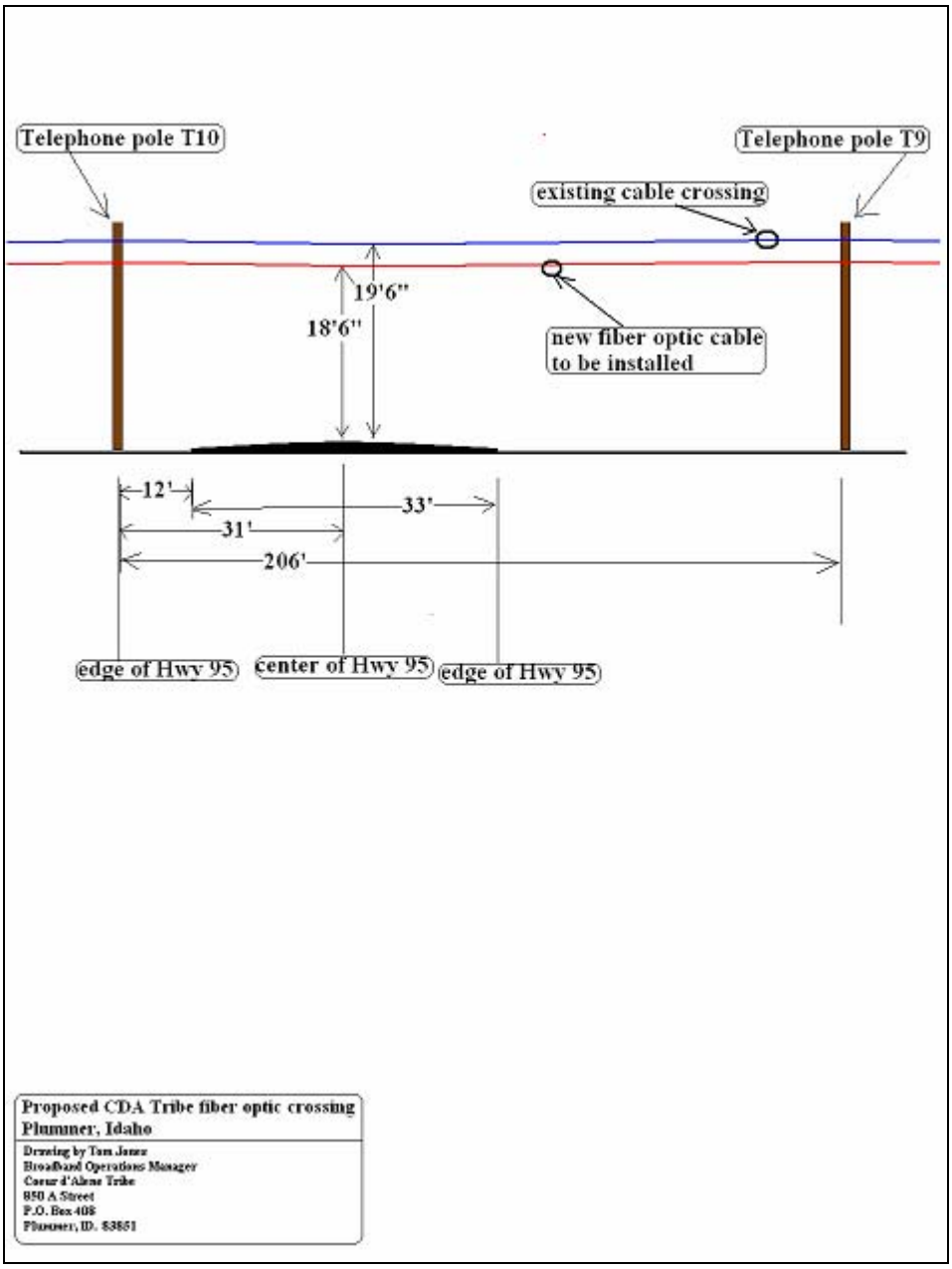
11.3.10

11.3.11 Section 11.3.12 and section 11.3.13 diagram the overhead Fiber-optic cable crossing of highway 5.

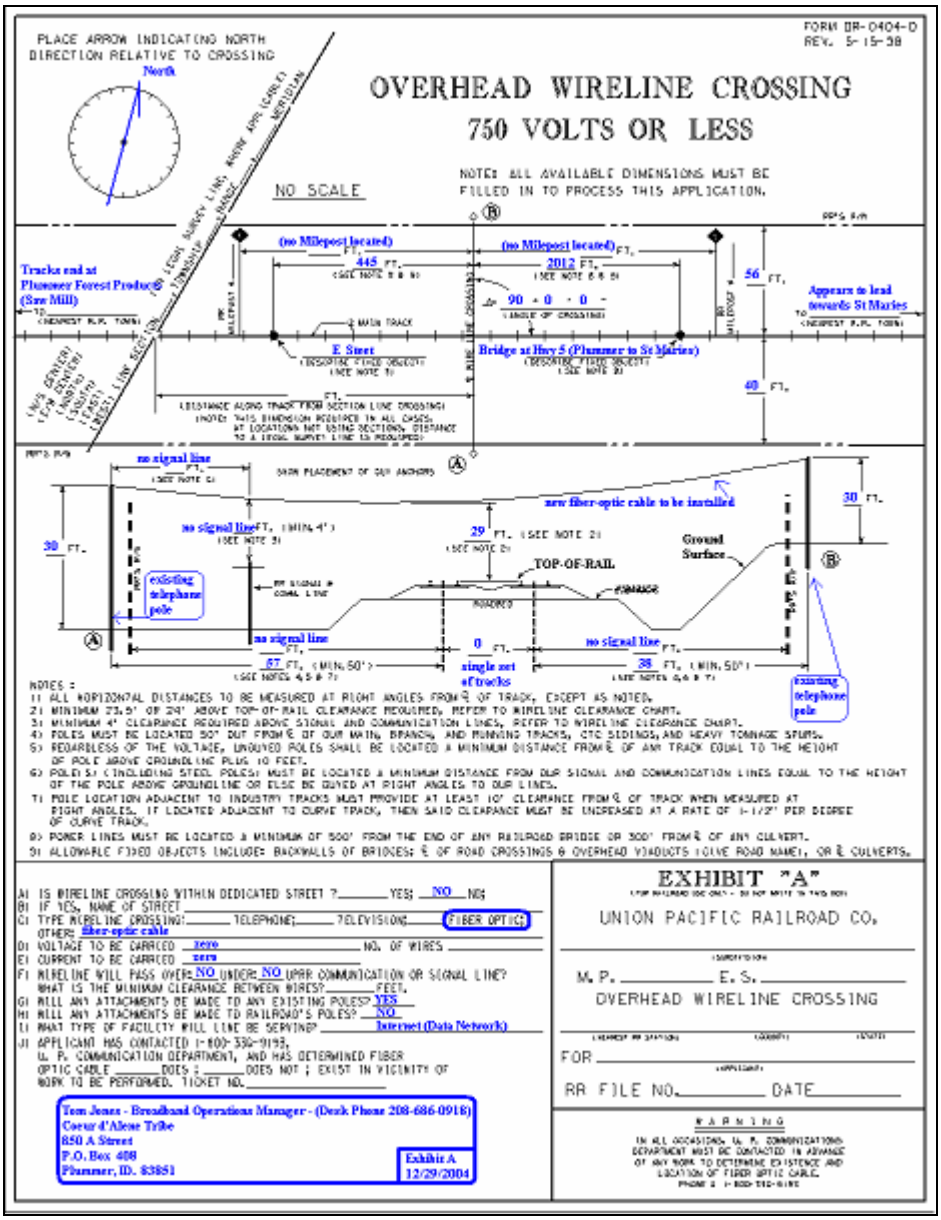
11.3.12



11.3.13

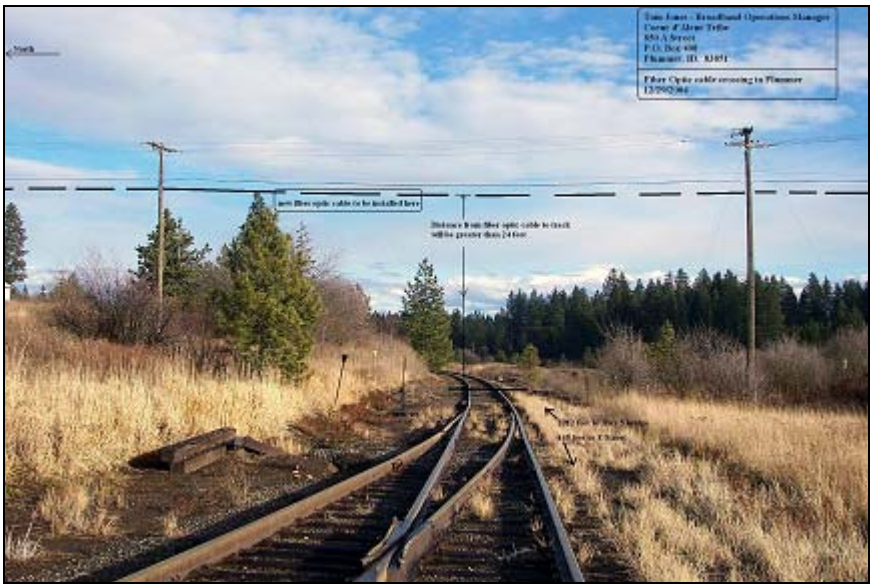


11.3.14 Sections 11.3.15, 11.3.16 and 11.3.17 diagrams the overhead Fiber-optic cable crossing of the UP railroad tracks.

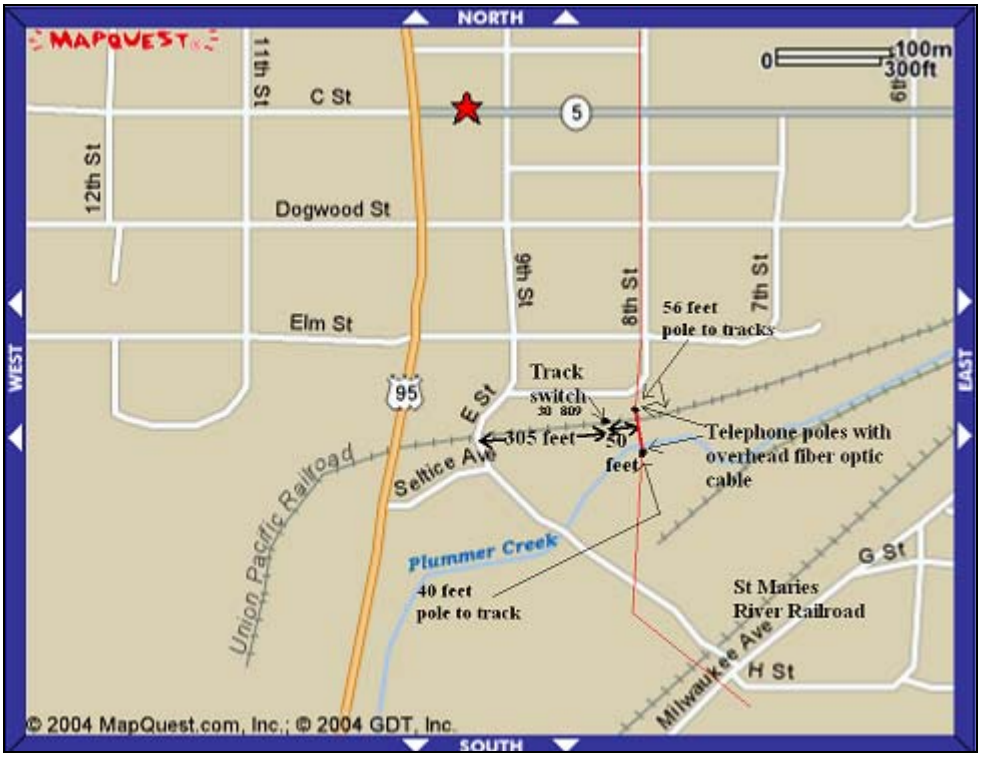

FORM DR-0404-D
REV. 5-15-98
PLACE ARROW INDICATING NORTH DIRECTION RELATIVE TO CROSSING
North
OVERHEAD WIRELINE CROSSING
750 VOLTS OR LESS
NO SCALE
NOTE: ALL AVAILABLE DIMENSIONS MUST BE FILLED IN TO PROCESS THIS APPLICATION.
Tracks end at Plummer Forest Products (Saw Mill)
(no Milepost located)
445 FT.
2012 FT.
90 ° 0 ' 0 "
56 FT.
Appears to lead towards St Maries
2 MAIN TRACK
E Street
Bridge at Hwy 5 (Plummer to St Maries)
40 FT.
no signal line
30 FT.
new fiber-optic cable to be installed
existing telephone pole
29 FT.
TOP-OF-RAIL
Ground Surface
0 FT.
single set of tracks
57 FT. (MIN. 50')
38 FT. (MIN. 50')
NOTES :
1) ALL HORIZONTAL DISTANCES TO BE MEASURED AT RIGHT ANGLES FROM ℄ OF TRACK, EXCEPT AS NOTED.
2) MINIMUM 23.5' OR 24' ABOVE TOP-OF-RAIL CLEARANCE REQUIRED, REFER TO WIRELINE CLEARANCE CHART.
3) MINIMUM 4' CLEARANCE REQUIRED ABOVE SIGNAL AND COMMUNICATION LINES, REFER TO WIRELINE CLEARANCE CHART.
4) POLES MUST BE LOCATED 50' OUT FROM ℄ OF OUR MAIN, BRANCH, AND RUNNING TRACKS, CTC SIDINGS, AND HEAVY TONNAGE SPURS.
5) REGARDLESS OF THE VOLTAGE, UNGUYED POLES SHALL BE LOCATED A MINIMUM DISTANCE FROM ℄ OF ANY TRACK EQUAL TO THE HEIGHT OF POLE ABOVE GROUNDLINE PLUS 10 FEET.
6) POLE(S) (INCLUDING STEEL POLES) MUST BE LOCATED A MINIMUM DISTANCE FROM OUR SIGNAL AND COMMUNICATION LINES EQUAL TO THE HEIGHT OF THE POLE ABOVE GROUNDLINE OR ELSE BE GUYED AT RIGHT ANGLES TO OUR LINES.
7) POLE LOCATION ADJACENT TO INDUSTRY TRACKS MUST PROVIDE AT LEAST 10' CLEARANCE FROM ℄ OF TRACK WHEN MEASURED AT RIGHT ANGLES. IF LOCATED ADJACENT TO CURVE TRACK, THEN SAID CLEARANCE MUST BE INCREASED AT A RATE OF 1-1/2' PER DEGREE OF CURVE TRACK.
8) POWER LINES MUST BE LOCATED A MINIMUM OF 500' FROM THE END OF ANY RAILROAD BRIDGE OR 500' FROM ℄ OF ANY CULVERT.
9) ALLOWABLE FIXED OBJECTS INCLUDE: BACKWALLS OF BRIDGES; ℄ OF ROAD CROSSINGS & OVERHEAD VIADUCTS (GIVE ROAD NAME), OR ℄ CULVERTS.
A) IS WIRELINE CROSSING WITHIN DEDICATED STREET ?_____YES; NO NO;
B) IF YES, NAME OF STREET _____
C) TYPE WIRELINE CROSSING: _____TELEPHONE; _____TELEVISION; FIBER OPTIC;
OTHERS fiber optic cable
D) VOLTAGE TO BE CARRIED zero NO. OF WIRES _____
E) CURRENT TO BE CARRIED zero
F) WIRELINE WILL PASS OVER NO UNDER NO UPPR COMMUNICATION OR SIGNAL LINE?
WHAT IS THE MINIMUM CLEARANCE BETWEEN WIRES?_____FEET.
G) WILL ANY ATTACHMENTS BE MADE TO ANY EXISTING POLES? YES
H) WILL ANY ATTACHMENTS BE MADE TO RAILROAD'S POLES? NO
I) WHAT TYPE OF FACILITY WILL LINE BE SERVING? Internet (Data Network)
J) APPLICANT HAS CONTACTED 1-800-336-9193, U. P. COMMUNICATION DEPARTMENT, AND HAS DETERMINED FIBER OPTIC CABLE _____DOES ; _____DOES NOT ; EXIST IN VICINITY OF WORK TO BE PERFORMED. TICKET NO._____
Tom Jones - Broadband Operations Manager - (Desk Phone 208-686-0918)
Coeur d'Alene Tribe
850 A Street
P.O. Box 408
Plummer, ID. 83851
Exhibit A
12/29/2004
EXHIBIT "A"
UNION PACIFIC RAILROAD CO.
M. P. _____ E. S. _____
OVERHEAD WIRELINE CROSSING
FOR _____
RR FILE NO._____ DATE_____
WARNING
IN ALL OCCASIONS, U. P. COMMUNICATIONS DEPARTMENT MUST BE CONTACTED IN ADVANCE OF ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE.

11.3.15

11.3.16

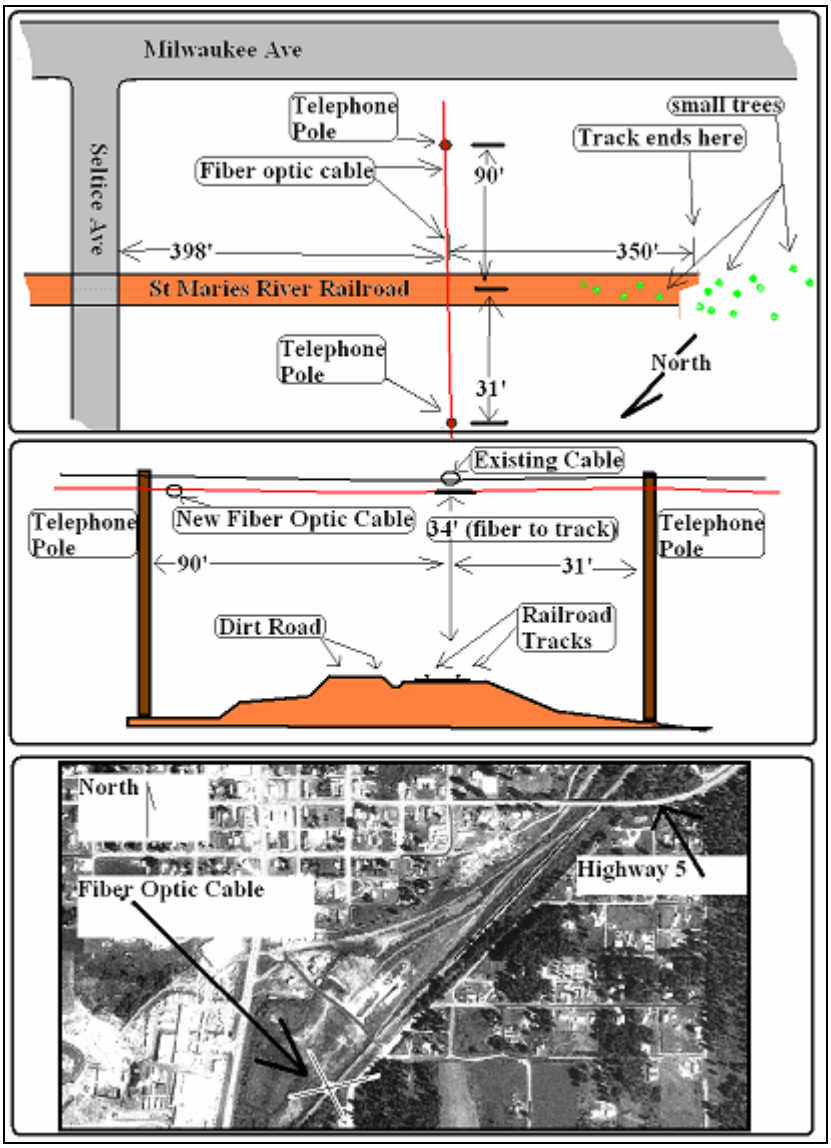


11.3.17



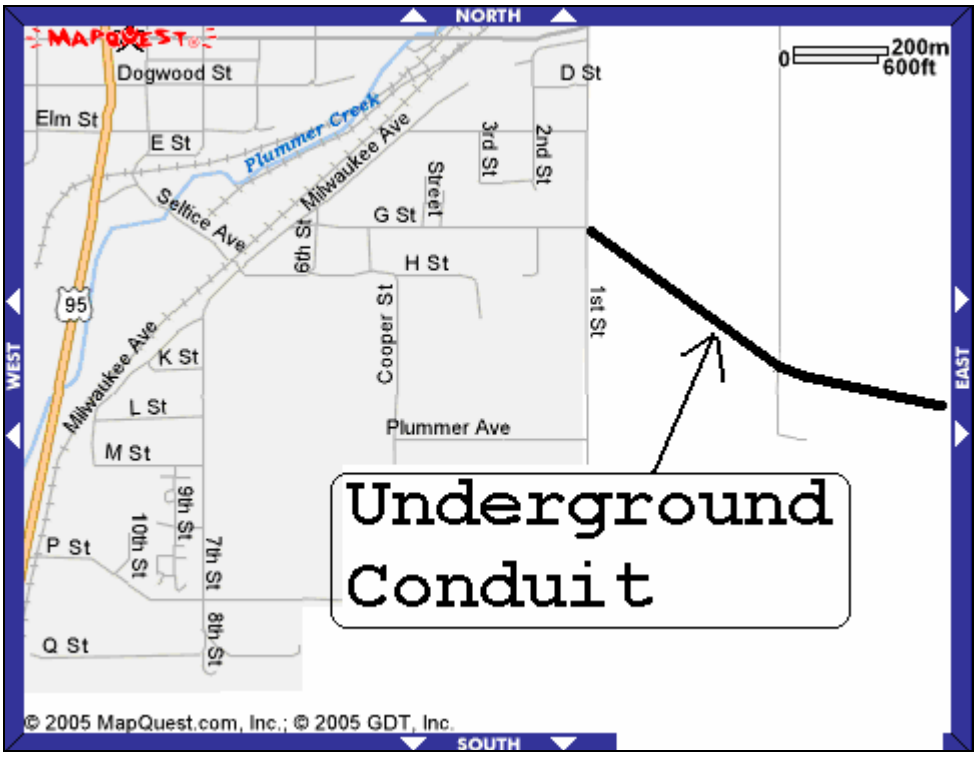
11.3.18 Section 11.3.19 diagrams the overhead Fiber-optic crossing of the St Maries River railroad tracks.

11.3.19



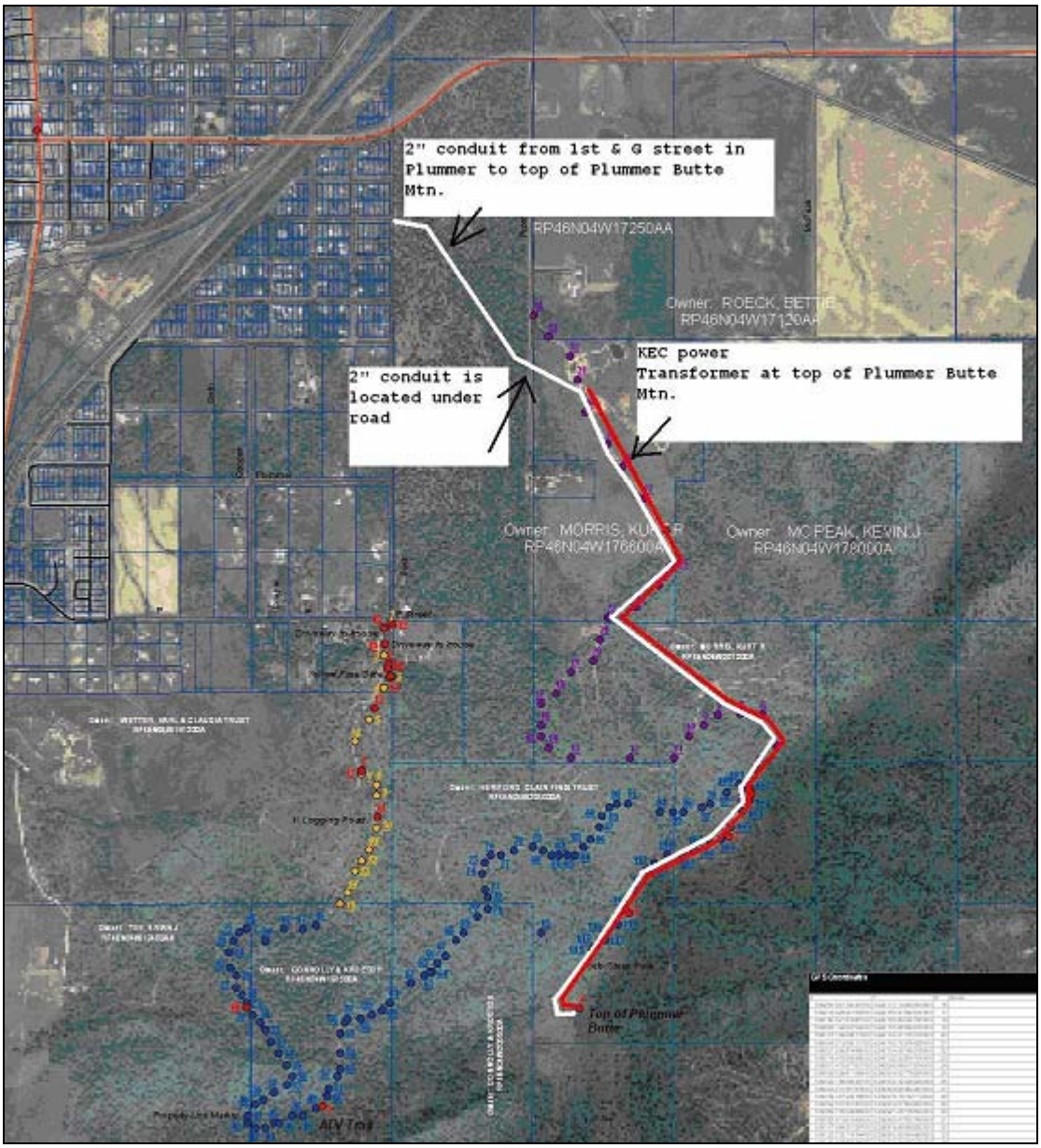
11.3.20 Section 11.3.21 diagrams where the Fiber-optic overhead telephone pole to telephone pole route will end will end and where the underground 2 inch conduit begins for the underground portion of the Fiber-optic cable run. This location is at 1st and G streets in Plummer, Idaho.

11.3.21



11.3.22 Section 11.3.23 is an underground route map of the existing buried 2 inch conduit. The white line indicates the conduit route. The red line indicates where there is buried underground power in the same ditch. There is a sufficient number of vaults along the conduit route to permit cable pulling through the conduits. The conduits have pull strings in them and were been blown with a mouse when they were buried. All underground Fiber-optic cable will be pulled with a trace locater wire.

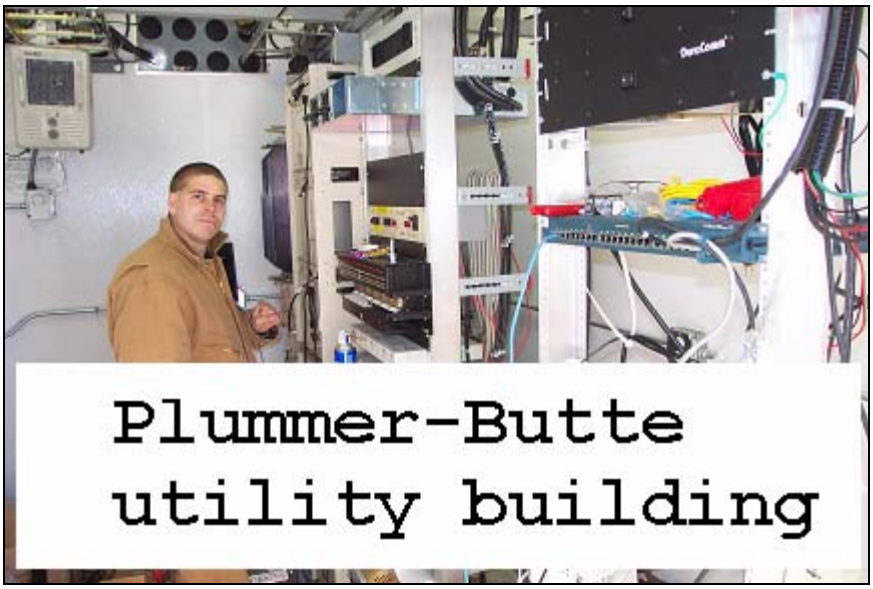
11.3.23



11.3.24 Section 11.3.25 is a picture of the utility building at the top of Plummer-Butte mountain. The existing underground 2 inch conduit currently ends next to the building. The 2 inch conduit is to be extended the final few feet to enter the building.

11.3.25 

11.3.26 Section 11.3.27 is an image of the inside of the utility building. The right most rack shown shall have a contractor supplied 19 inch fiber patch-panel installed. All fiber strands at Plummer-Butte are to be terminated into the patch-panel with ST connectors.

11.3.27 

11.4 FIBER-OPTIC CABLE SPECIFICATIONS

11.4.1 CABLED FIBER SPECIFICATIONS

Single-Mode Fiber-optic cable shall consist of 36 or greater strands.

The single-mode fiber shall meet EIA/TIA-492CAAB, "Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers," and ITU-T G.652.C, "Characteristics of Single-mode Optical Fiber Cable."

Fiber shall have a mode field diameter of 9.20 $\pm$ 0.40 μm at 1310 nm and 10.40 $\pm$ 0.80 μm at 1550 nm. Fiber core-clad concentricity shall be ≤ 0.5 μm. Fiber cladding diameter shall be 125.0 $\pm$ 0.7 μm. Fiber cladding non-circularity shall be ≤ 1%. Fiber coating diameter shall be 245 $\pm$ 5 μm.

The attenuation specification shall be a maximum value for each cabled fiber at 23 $\pm$ 5°C on the original shipping reel. The cabled fiber attenuation of the fiber shall be $\leq$ 0.4 dB/km at 1310 nm and $\leq$0.3 dB/km at 1550 nm. The attenuation at the water peak (1383 nm) shall not exceed 0.35 dB/km. The cabled fiber shall be capable of operating in the 1360 nm to 1480 nm water peak region. The attenuation due to 100 turns of fiber around a 50 $\pm$ 2 mm diameter mandrel shall not exceed 0.05 dB at 1310 nm and 0.10 dB at 1550 nm. The attenuation due to 100 turns of fiber around a 75 $\pm$ 2 mm diameter mandrel shall not exceed 0.10 dB at 1625 nm. There shall be no point discontinuities greater than 0.10 dB at 1310 nm and 1550 nm.
The maximum dispersion shall be $\leq$ 3.2 ps/(nm•km) from 1285 nm to 1330 nm and shall be < 18 ps/(nm•km) at 1550 nm.

The cabled fiber shall support Gigabit Ethernet (GbE) operation according to the 1000BASE-LX (1310 nm) specifications up to 5000 meters in accordance with the GbE standard.
The cabled fiber shall support laser-based 10 Gigabit Ethernet (10GbE) operation according to the 10GBASE-LX4 (1300 nm region), 10GBASE-L (1310 nm) and 10GBASE-E (1550 nm) specifications for distances of 10 km, 10 km and 40 km, respectively.

11.4.2 CABLE SPECIFICATIONS

Cable shall have a storage temperature range of -40° to 70°C, an installation temperature range of -30° to 70°C, and an operating temperature range of -40° to 70°C.

Cable shall meet the functional requirements of Rural Utilities Service (RUS) 7 CFR 1755.900 and be fully compliant with ICEA S-87-640.

Manufacturer shall be ISO 9001 and TL 9000 registered. Cable manufacturer shall have a minimum of 5 years in manufacturing optical fiber cable in order to demonstrate reliable field performance.